

Ecorace Challenge

From:

A partnership between KU Leuven and 2 important waterway managers in Flanders, i.e. nv De Scheepvaart and Waterwegen & Zeekanaal NV.

Faculty/Department/Programme/External partners:

Faculty of Engineering Technology / Mechanical Engineering Technology Cluster / Sustainable Engineering Research Group (subgroup Intelligent Mobility) / Programme: Master of Engineering Technology / External partners can be found at www.ecorace-challenge.be

Abstract:

The Ecorace Challenge is a competition organised to promote inland waterway transport and to draw young people's attention to the importance of this sector. Several teams build their own ecological vessel and write a business plan about it.

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Description:

The Ecorace Challenge is a competition organised by nv De Scheepvaart and Waterwegen & Zeekanaal NV, two major waterway managers in Flanders. The challenge? Teams of students are to build a 6 metre-scale model of an ecological vessel, using innovative materials and a (re)new(ed) drive train. During the weekend of the Ecorace Challenge (8-9-10 May 2015) the performance of the different vessels is measured and judged by an international, professional and academic jury. The teams have to perform several challenges, such as sprint, slalom, start-stop-backwards and endurance. In addition, a business plan and design report of the vessel are to be drawn up and presented to a jury of potential investors. Because safety is a major factor during this whole competition, the teams also have to perform an FMEA (Failure Mode and Effects Analysis).

With this initiative we do not only seek to promote inland waterway transport, but also want to encourage young people to help build the future of this sector. At first sight, inland waterway transport seems like a very old-fashioned and not very sustainable sector. However, after having taken a closer look, this assumption does not seem to be entirely accurate. Compared to other modes of transport, inland waterway transport performs better in terms of environment-friendliness and sustainability. In addition, sufficient reserve capacity is still available on inland waterways. Still, by developing more energy efficient and/or alternative drive trains, improvements can still be made in terms of CO₂, NO_x, and fine dust in particular.

During the Ecorace Challenge on 9, 10 and 11 May in 2014, three teams of students competed against each other. The University of Antwerp was crowned all-round winner. KU Leuven - Group T received the award for most innovative vessel and the Antwerp Maritime Academy was presented with the award for most efficient vessel. All three teams developed an innovative and efficient vessel on the basis of an alternative drive train. The first edition was definitely a success!

In May (8-9-10) 2015 the second edition of the Ecorace Challenge took place on the Canal to Beverlo in Leopoldsburg. 6 teams registered: 4 of them (UAntwerpen Solar Boat, Dutch Solar Boat, KU Leuven e-boat and Odispeed) in the category 'non-cargo' and 2 (KU Leuven Junior Cargo and KU Leuven Ecochallenge Team) in the category 'cargo' transporting a cargo of 1 ton.